

Title: Process for the heat treatment of structure castings made from an aluminum alloy to be used for this purpose

Abstract

A process for the heat treatment of structure castings made from an aluminum alloy, comprising the steps of: placing the structure casting onto a contour-embracing product receiving device, heating to 490°C over the course of approximately 30 minutes, holding the temperature of 490°C for a time of between 90 and 120 minutes, quenching in air from 490°C to approximately 100° over the course of approximately 4 minutes, if appropriate followed by quenching in water, heating to 250°C over the course of approximately 15 minutes, holding the temperature of 250°C for a time of between 30 and 120 minutes, quenching in air to 40°C, if appropriate followed by quenching in water; a light metal alloy for use with this process, having the following composition: Si: 2-11.5%, Fe: 0.15-0.4%, Mg: 0.3-5.5%, Cu & It: 0.02%, Mn: 0.4-0.8%, Ti: 0.1-0.2%, remainder aluminum and trace elements, the alloys with a high silicon content having a low magnesium content and vice versa.